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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,908	07/25/2003	Hiroyuki Otaki	TJK/402	2412

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EXAMINER
ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,908	OTAKI ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/25/03 & 8/25/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3-5,12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshine et al. '630.

Toshine et al. '630 teaches a fourth multilayered structure comprising a colored holographic transfer foil of a PET substrate with a release coating, a protective layer a volume hologram, an uncolored heat seal layer, a colored heat seal layer with a thickness of 2 microns and a second releaseable PET film. The colored heat seal layer is formed using a dye. [0131-0133) The coloring agents in the second heat seal layer can be dyes or pigments, but dyes have the disadvantage of migration. The pigments should be present in an amount of preferably 10-30% and the averages particle size should be 10 microns or less, preferably 1 microns to as not to texture the second heat seal layer [0064-0069]. The breaking strength of the holographic layer is 0.03- 3 kg/mm^2. [0090].

It would have been obvious to one skilled in the art to modify the cited examples by using pigment particles having diameters of less than 1 micron, rather than a dye in the colored adhesive layer to achieve the same effect without the possibility of dye migration.

3. Claims 1-6, and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshine et al. '253.

Toshine et al. '253 teach a holographic transfer foil comprising a substrate, a holographic film having a breaking strength of 0.03-3 kg/mm^2 and a breaking elongation of preferably 0.1-10 % at 25 degrees C [0072]. The use of a release/delaminating layer applied to the substrate is disclosed [0107]. Useful materials for the heat sensitive adhesive layer are disclosed and include pigments having average particulate diameters of less than 10 microns in amounts of 10-30% [0098-0102]. Useful components for the holographic recording layer are disclosed [0042-0067]. In the sample prepared for evaluation [0132+], a PET film was coated to 10 microns with the holographic composition, and had a breaking elongation of 4.9 % at 25 degree C, the release layer was coated on a support and the heat sensitive adhesive layer (EC1200) was coated to a thickness of 10 microns [0148-0161].

It would have been obvious to one skilled in the art to modify the cited examples by using pigment particles having diameters of less than 1 micron to color the adhesive layer to achieve the same effect without the possibility of dye migration, further based upon the content of the pigments, the resultant adhesive layer would have a breaking elongation/strain within the recited values. Some of the pigments disclosed are held to be inherently fluorescent.

4. Claims 1-6 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioda et al. EP 1022625, in view of Killey '672.

Shioda et al. EP 1022625 teach a holographic transfer foil comprising a substrate, a holographic film having a breaking strain of 0.5-15% at 25 degrees C and 0.5-30% at 120 degrees C and an adhesive layer. The breaking strain of the holographic layer is preferably 1-10% at 25 degrees C and 1-15% at 120 degrees C [0065]. The use of a release layer applied to the substrate is disclosed and this layer may be 0.1- 2 microns in thickness [0070]. Useful

materials for the heat sensitive adhesive layer are disclosed. [0069]. A barrier layer may be present between the release layer and the holographic layer to prevent migration of low molecular weight compounds from the release layer into the hologram layer [0075]. Useful components for the holographic recording layer are disclosed. [0094-0117, 0127-0153].

In example A3 [0180+], a PET film was coated to 3 g/m^2 with the holographic composition, and had a breaking strain of 6 % at 25 degree C, the release layer was coated to a weight of 1 g/m^2 on a support and the heat sensitive adhesive layer (AD-1790-15) was coated to 3 g/m^2 .

Killey '672 teaches that conventionally holographic transfer foils use hot seal adhesive compositions containing filler or pigments to aid in the disruption of the adhesive layer upon transfer to yield edges with clean breaks and well defined images. The use of ~10% of particles (1 part to 9 parts resin or 1 part in 10 parts total) is specifically disclosed. (8/56-9/23)

It would have been obvious to one skilled in the art to modify the cited example of Shioda et al. EP 1022625 by adding particles to the adhesive layer in an amount of 10 parts for every part of the adhesive composition as taught by Killey '672 with a reasonable expectation of improving the image definition, further one of ordinary skill would have found it obvious to one skilled in the art to optimize the amount of particles to have both the adhesive layer and the holographic layer break at the same place to produce well defined images.

5. Claims 1-6 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioda et al. EP 1022625, in view of Killey '672 and Morii et al. '378

Morii et al. '378 teaches the use of various particles in the holographic layer including inorganic and resins based particles with sizes in the 1- 100 nm range in amounts of 10-100 parts to 100 parts of the holographic recording material to impart fragility to the hologram layer.

(40/65-42/14). The fluorescent particles add another layer of security. (41/43-47). The use of a fragile/brittle layer is also disclosed. (46/12-35)

In addition to the basis provided above, it would have been obvious to use such particles as disclosed as useful in imparting the same fragility in the hologram layer by Morii et al. '378 to perform the same function in the adhesive layer.

6. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otaki et al. '521, in view of Killey '672.

Otaki et al. '521 teach a holographic transfer foil comprising a substrate, a holographic film having a breaking strain of 0.1-3% at 25 degrees C and 0.1-5% at 130 degrees C and an adhesive layer. The breaking strain of the holographic layer is preferably 0.1-1% at 25 degrees C and 0.1-1.5% at 130 degrees C [0035]. The use of a release/delaminating layer applied to the substrate is disclosed and this layer may be 0.1- 2 microns in thickness [0106-0107]. Useful materials for the heat sensitive adhesive layer are disclosed. [0102-103]. A barrier layer may be present between the release layer and the holographic layer to prevent migration of low molecular weight compounds from the release layer into the hologram layer [0111-1112]. Useful components for the holographic recording layer are disclosed and the holographic layer includes fine particles to impart a fragility to the holographic layer. [0038-0045, 0048-0092].

In the sample prepared for evaluation [0132+], a PET film was coated to 10 microns with the holographic composition, and had a breaking strain of 1.5 % at 25 degree C (table 1), the release layer was coated to a thickness of 1 microns on a support and the heat sensitive adhesive layer (EC1200) was coated to a thickness of 2 microns [0133-0142]. The types of particles include inorganic materials and various resin particles having sizes of 100-600 nm (0.1 to 0.6 microns) in

amounts of 1-30% and serve to improve the foil cutting properties of the holographic layer. [0039-0045].

It would have been obvious to one skilled in the art to modify the cited example of Shioda et al. EP 1022625 by adding particles to the adhesive layer in an amount of 10 parts for every part of the adhesive composition as taught by Killey '672 with a reasonable expectation of improving the image definition, further one of ordinary skill would have found it obvious to one skilled in the art to optimize the amount of particles to have both the adhesive layer and the holographic layer break at the same place to produce well defined images and to use such particles as disclosed as useful in imparting the same fragility in the hologram layer to perform the same function in the adhesive layer.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Azakami et al. '816 teach holograms with breaking extension or 0.1-10% [0050].

Toshine et al. '897 teach holographic layers with colored adhesive layers. [0060]

Toshine et al. '360 teach holographic layers with colored adhesive layers. (12/22-50)

Toshine et al. '397 teach holographic layers with colored adhesive layers. (15/20-55)

Boswell '678 teaches a hot melt adhesive layer used in a holographic transfer foil, where the hologram is an embossed hologram (6/27-40)

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Martin J Angebranndt
Primary Examiner
Art Unit 1756

09/21/2005